

[GMOWG findings]

1. The president's budget projects a reduction of TIMED operations support to zero in FY14. While we understand that the zeroing out of TIMED does not signal an intention to shut off the mission in FY14, the GMOWG is concerned about this placeholder funding value. TIMED remains a productive mission addressing fundamental science topics at the core of Heliophysics research. TIMED is, with the CINDI mission, one of only two current sources of Heliophysics Observatory data targeting the upper atmosphere/ionosphere. Further, the study of long term trends in the upper atmosphere, of which TIMED is uniquely capable, is an exciting and newly emerging topic in aeronomy with implications both for fundamental questions of planetary evolution as well as operational considerations such as orbital drag. We agree with the Senior Review that some savings may be found in management/operations and find these avenues should be explored to assure continued collection and archiving of scientific data. The GMOWG finds that a timely restitution of TIMED operational resources would ensure continued data access and support for this unique and productive mission.

2. The GMOWG continues to strongly support the NASA Heliophysics Division in the quest to develop procedural changes to the competed R&A program with the goal of reducing proposal writing and review burden on the community, the review burden on headquarters, and proposal funding decision turn around time. The ROSES 2012 solicitation implemented a number of changes, most of which had been previously discussed at the MOWG level. These changes include:

- i. A mandatory Step-1 proposal (previously a NOI) with fixed teaming arrangements. This change allows headquarter personnel to start forming review panels immediately at the Step 1 stage, so that within weeks of Step 2 submittal the review panels can meet. If nothing else happens, this change alone should shorten the proposal turn around time, perhaps by a few months.

- ii. Simultaneous competition of SR&T and GI, which should reduce the number of duplicate proposals submitted to both programs.

- iii. The explicit linkage of the GI program to currently operating NASA missions and their objectives makes the GI distinct from the SR&T. The G/MOWG has some concerns regarding the language in the solicitation, "supporting studies of the current science goals of these missions," which appears to exclude science unrelated to those explicitly called out in the senior review, even if this science relies exclusively on data collected from that mission. The G/MOWG continues to strongly support the GI program, and supports the effort to make it a distinct program element.

- iv. Declaring that the LWS Focused science topics are 'out of scope' for the GI and SR&T also makes program elements distinct, and should reduce duplicate proposals.

3. The current President's budget request has no budgeted funding for an extended RBSP mission. While Extended mission is contingent on a successful senior review and the operational status of the spacecraft, recovering from a zero budget may be difficult and the MOWG recommends some nominal placeholder funding here.

[These are 'internal' findings]

## GMOWG findings relating to the two step process

1. The G/MOWG supports the continued investigation of a two-step proposal process, and greatly appreciate HQ's willingness to engage the community. This has been an ongoing, fruitful process. We believe this could be a good way to relieve proposal burden on proposers, reviewers and HQ. Any process further implemented should preserve the recognized fairness of the current heliophysics review process.
2. The G/MOWG supports, in principle, the implementation of a two-step review and selection process. A positive ancillary benefit of a down selection is that the final panel will spend more time on fundable proposals, with a reduced workload because clearly unfundable proposals are already declined at the step 1 process. Proposers will also benefit, in that those who are invited for the step 2 have an incentive to write strong proposals, while those who were declined can focus on sharpening their Step 1 proposals. Finally, proposers will get more feedback more quickly, and be able to better plan future work and future proposal submissions, given the rapid turnaround of the Step-1 review process
3. Should HQ decide to implement a two step review process, the G/MOWG suggests phasing the down select, such that the first year of implementation selects ~75% to send to step two. Step one results could be communicated to the proposers, with the option of a voluntary proposal withdrawal. After the review panel, HQ could check if awarded proposals match the step 1 reviews. The results of this experiment should be evaluated before deciding whether proceed with a fully implemented two-step review process.
4. The group is split on the utility of a blind review process for step 1, but suggest this option be explored.
5. The step 1 review process should be automated and streamlined, or there will be no gain in efficiency.
6. The step 1 review process should be guided by the a set of specific review questions. We have developed a set of sample questions, grouped into topic levels. These questions should be developed so that the requirements for a high score are clear to both reviewer and proposer.
7. To quantify the Step 1 review requires two scores: the median and standard deviation. We strongly disagree with suggestions to throw out high and low score. There can be cases where one low score is critically important -- for example, if a single reviewer knows that the dataset has a fatal flaw. Fairness in scoring is achieved by well-defined questions, and the number of reviewers, not by post-processing of the scores.
8. In addition to numerical scoring, we suggest leaving room for a text box at the bottom for comments about the proposal. These comments are passed on to HQ for

helping to pass through to Step 2, particularly for borderline proposals. We do not suggest passing the raw text to proposers. Rather, it should be kept by the program manager, so that if the proposer contacts them they have some text that may help explain the scoring to the proposer.

9. The proposer should get mean/median scores (perhaps the standard deviation as well, although there was not consensus) for each question, mapped to the words ('Excellent', 'good', etc.), plus a final scoring reflecting the overall grade. We should also explore providing the mean/median for each question for the entire pool of proposals, perhaps further split into accepted / rejected proposals. These numbers will provide feedback to the proposers about where their proposal fell short.

10. Step 1 proposal elements should be mapped explicitly to the step 1 review criteria questions which should be provided to proposers. We should also consider forcing a structure on the step 1 proposals that proposers must follow (these could be text boxes on a web form).

11. The G/MOWG prefers 2-3 pages, or 'pages' if web-based, for a step 1 proposal.